

MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for January, 1898, is based on 2,916 reports from stations occupied by regular and voluntary observers, classified as follows: 147 from Weather Bureau stations; numerous special river stations; 32 from post surgeons, received through the Surgeon General, United States Army; 2,567 from voluntary observers; 96 received through the Southern Pacific Railway Company; 23 from Life-Saving stations, received through the Superintendent United States Life-Saving Service; 31 from Canadian stations; 20 from Mexican stations; 7 from Jamaica, W. I. International simultaneous observations are received from a few stations and used, together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Government Survey, Honolulu; Dr. Mariano Bárcena, Director of the Central Meteorological Observatory of Mexico; Mr. Maxwell Hall, Government Meteorologist,

Kingston, Jamaica; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; and Commander J. E. Craig, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to generally conform to the modern international system of standard meridians, one hour apart, beginning with Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are generally corrected to agree with the eastern standard; otherwise, the local meridian is mentioned.

STORM WARNINGS AND WEATHER FORECASTS.

By Lieut. Col. H. H. C. Dunwoody, Supervising Forecast Official.

Under this head it is proposed to make note of all extreme and injurious weather conditions occurring during the month, and the warnings of the same issued by the Bureau, with instances, as far as reported by observers or the press, in which these warnings were of special public benefit. The signals displayed by the Weather Bureau will be referred to as "information," "storm," "hurricane," "cold wave," and "norther," respectively.

The injurious weather conditions of most marked note that occurred during the month, were the frosts and freezing weather in Florida on the 2d, 3d, and 4th, and in the citrus regions of southern California from the 10th to 13th and 20th to 27th, inclusive, the storms of the 21st to 23d and 24th to 26th, that moved from Texas northeast to the New England Coast, and the severe storm of January 31 to February 1, on the New England Coast. In this connection mention is also made of the moderate flood that occurred in the Ohio and central Mississippi valleys during the latter part of January and the early part of February.

THE FLORIDA FREEZE OF JANUARY 2-4, 1898.

Severe cold weather prevailed in Florida on the 2d, 3d, and 4th, freezing temperature on the 2d and 3d, and heavy frosts on the 4th, extending as far south as the latitude of Jupiter. Following are the minimum temperatures which were reported

from Jacksonville, Tampa, and Jupiter, respectively, viz January 2, 24°, 28°, 30°; January 3, 26°, 26°, 30°; January 4, 38°, 38°, 34°.

These conditions were very destructive to early vegetables throughout this region, killing nearly all those of the more tender kinds, except such as were protected. Considerable injury was done to citrus trees, many of the young trees and later shoots being destroyed. The pineapple interests also suffered some damage, although few, if any, plants were entirely killed.

Warnings of these injurious conditions were sent from the Central Office as follows: On the morning of January 1 telegrams to Jacksonville, Tampa, and Jupiter, reading: "For eastern Florida colder with freezing temperature in northern portions and frosts in southern portions Sunday morning." On the morning of January 2, telegrams to the same stations reading: "Freezing temperature and frosts in central and north portions, and severe frosts in south portion of Florida, Monday morning." Although both of the days on which these messages were sent were holidays, making effective dissemination difficult, the warnings were, through the efforts of the Weather Bureau observers, by means of the mail, telegraph, and telephone services, and the cooperation of the railroad officials, very widely distributed throughout the threatened districts, and enabled the people to take effective measures for the protection of their crops.